UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/225,486	01/06/1999	MITSUHIRO UCHIDA	Q52871	2417

7590	10/07/2004

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EXAMINER
HANNETT, JAMES M

ART UNIT	PAPER NUMBER
2612	

DATE MAILED: 10/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/225,486	UCHIDA ET AL.
	Examiner	Art Unit	
	James M Hannett	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _25 June 2004_.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
     closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _2,3,10,13,15 and 17-27_ is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _2,3,10,13,15 and 17-27_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on _12 November 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All b)☐ Some * c)☐ None of:
       1.☒ Certified copies of the priority documents have been received.
       2.☐ Certified copies of the priority documents have been received in Application No. _____.
       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
            application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

Response to Arguments

Applicant's arguments filed July 2, 2004 have been fully considered but they are not persuasive. The applicant argues that Terashita does not teach that the average value of interest is a total average of averages and that the tricolor average corresponds to individual color averages rather than a total average. The examiner points out that on Column 17, Lines 26-27 and on Column 3, Lines 12-16 the tricolor average density is defined as (R+G+B)/3 this is clearly a total average and does not correspond to a single color. Furthermore, Terashita does not refer to the tricolor average as an average of averages. However, The examiner points out that if all the Red pixels, Green pixels, and Blue pixels are averaged separately and then the three numbers corresponding to the average value for Red, Green, and Blue where averaged together the result would be equivalent to a tricolor average of summing all pixel values and dividing by the number of pixels.

The applicant argues that Sato does not teach that the characteristic value, when each of the digital image signals is composed of RGB color signals, is a value regarding chroma or color saturation of each of the digital image signals. The applicant argues that although Saito discloses obtaining and adjusting chroma, Saito does not teach or suggest extracting a value regarding chroma as a characteristic value representing a characteristic value of an image sensing device.

The examiner notes that this limitation is written broadly and that the examiner views obtaining a value of chroma as extracting a value regarding chroma. Furthermore, The examiner views the value regarding chroma as a characteristic value of an image sensing device. Saito teaches on Column 5, Lines 50-53 that the chroma information corresponds to the integration

value. Therefore, the chroma information is representative of the integration time that the camera

was set at when the image was captured.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
sale in this country, more than one year prior to the date of application for patent in the United States.

1:   Claims 15, 17, 21, 22 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by

USPN 5,568,194 Abe.

2:      In regards to Claim 15, Abe teaches in the abstract an image processing method for

carrying out white balance (image processing) on a digital image signal. Abe teaches the use of

extracting the luminance signal from digital image signals from two images of subjects

photographed by a digital camera. Abe further teaches the use of carrying out image processing

according to the luminance value on the digital image signals to perform a white balance

adjustment. Abe teaches in the abstract the use of extracting the luminance signal from digital

image signals from two images of subjects photographed by a digital camera. Abe teaches on

Column 3, Lines 25-44 that the luminance signal is extracted from an image wherein pixel data

from an original image is divided into N blocks, each of which is composed of an 8X8 matrix of

pixels. Abe teaches on Column 3, lines 59-65 that a luminance comparison function is performed

that gives the difference between the luminance signals of the two images. Abe teaches that the

difference is calculated by comparing a representative pixel for each block which corresponds to

the average luminance value of the block. The process of taking 8X8 pixel blocks and averaging

the pixel values to obtain a single average luminance value reduces the number of pixels and is

viewed as a thumbnail image. Abe teaches capturing two images and dividing each image into

blocks of 8X8 pixels. Abe further teaches averaging all the pixels within a given block to obtain

an average luminance value of the block. This process reduces the number of pixels in the image

by a factor of 64. These thumbnail images are then compared on a pixel-by-pixel basis to obtain

the luminance difference signal. Therefore, each of the thumbnail image signals (the two input

images after averaging of the 8x8 blocks) comprises a reduced size image of its respective image

of a plurality of images.

3:      As for Claim 17, Abe teaches in the abstract the use of recording means or memory for

recording the digital image signals to memory.

4:      As for Claim 21, Abe teaches on Column 3, lines 59-65 each of the thumbnail image

signals produces an image duplicative of its respective image of the plurality of images and

having a reduced physical appearance in relation to its respective image of the plurality of

images.

5:      In regards to Claim 22, Abe teaches on Column 3, lines 59-65 and in the abstract that

each of the plurality of images is stored as one image file. Abe teaches that the two images are

captured separately and correspond to an image captured with a flash and without a flash.

Therefore, it is inherent that the two images be stored separately.

6:      In regards to Claim 26, Abe teaches on Column 3, lines 59-65 the digital image signals

comprise the thumbnail image signals. The digital image signals are viewed as the pixels, and the

pixels comprise the thumbnail image.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
patent by another filed in the United States before the invention by the applicant for patent, except that an
international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
subsection of an application filed in the United States only if the international application designated the United
States and was published under Article 21(2) of such treaty in the English language.

7:      Claims 2, 3, 19, 20 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by

USPN 5,767,983 Terashita.

8:      As for Claim 2, Terashita teaches on Column 4, Lines 12-33 an image processing method

for carrying out image processing on a digital image signal. Terashita teaches the method of

extracting film characteristic data from image signals from a plurality of image frames. Terashita

further teaches the use of carrying out image processing according to the characteristic value on

the digital image signals. Terashita teaches on Column 7, Lines 15-66 and on Column 10, Lines

26-39 that when each of the digital image signals is composed of RGB color signals, the

characteristic data is a total average of averages of the digital image signals. Terashita further

teaches the method of converting RGB color signals in a digital image signal representing an

image of a gray subject to be equalized, based on the total average. Terashita teaches on Column

3, Lines 5-21 an image processing method wherein an average density is multiplied by a

weighting factor. Terashita teaches on Column 7, Lines 6-16 that the weight-factors can be set

predetermined weighting coefficients. Terashita teaches on Column 17, Lines 26-27 and on

Column 3, Lines 12-16 the tricolor average density is defined as $(R+G+B)/3$ this is clearly a total

average and does not correspond to a single color. Furthermore, Terashita dos not refer to the

tricolor average as an average of averages. However, If all the Red pixels, Green pixels, and Blue

pixels are averaged separately and then the three numbers corresponding to the average value for

Red, Green, and Blue where averaged together the result would be equivalent to a tricolor

average of summing all pixel values and dividing by the number of pixels.

9:      In regards to Claim 3, Terashita teaches on Column 16, Lines 6-22 that when the digital

image signals are composed of RGB color signals, photometric data for each color signal in each

pixel in each of the digital image signals is calculated. Terashita teaches on Column 24, Lines 6-

20 that weighting coefficients can be set respectively to characteristic data which is data from the

photometric data.

10:     As for Claim 19, Terashita teaches on Column 4, Lines 12-33 an image processing

method for carrying out image processing on a digital image signal. Terashita teaches the method

of extracting film characteristic data from image signals from a plurality of image frames.

Terashita further teaches the use of carrying out image processing according to the characteristic

value on the digital image signals. Terashita teaches on Column 17, Lines 26-27 and on Column

3, Lines 12-16 the tricolor average density is defined as (R+G+B)/3 this is clearly a total average

and does not correspond to a single color. Furthermore, Terashita dos not refer to the tricolor

average as an average of averages. However, If all the Red pixels, Green pixels, and Blue pixels

are averaged separately and then the three numbers corresponding to the average value for Red,

Green, and Blue where averaged together the result would be equivalent to a tricolor average of

summing all pixel values and dividing by the number of pixels.

11:     As For Claim 20, Terashita teaches on Column 4, Lines 12-33 an image processing

method for carrying out image processing on a digital image signal. Terashita teaches the method

of extracting film characteristic data from image signals from a plurality of image frames.

Terashita further teaches the use of carrying out image processing according to the characteristic

value on the digital image signals. Terashita teaches on Column 7, Lines 15-66 and on Column

10, Lines 26-39 that when each of the digital image signals is composed of RGB color signals,

the characteristic data is a total average of averages of the digital image signals. It is viewed by

the examiner that the total average of the average of all three of the color signals into a single

color signal represents the brightness of the pixels. Terashita teaches on Column 17, Lines 26-27

and on Column 3, Lines 12-16 the tricolor average density is defined as (R+G+B)/3 this is

clearly a total average and does not correspond to a single color. Furthermore, Terashita dos not

refer to the tricolor average as an average of averages. However, If all the Red pixels, Green

pixels, and Blue pixels are averaged separately and then the three numbers corresponding to the

average value for Red, Green, and Blue where averaged together the result would be equivalent

to a tricolor average of summing all pixel values and dividing by the number of pixels.

12:      As for Claim 27, Terashita teaches an extracting process of obtaining the image data and

an image processing process of weighting the averages these are different processes and are

therefore viewed as being performed separately.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

13:   Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,568,194

Abe in view of USPN 5,682,573 Ishikawa et al.

14:    As for Claim 18, Abe teaches the claimed invention as discussed in Claim 17, Abe does

not teach the use of recording a flag indicating whether or not the digital image signal has been

corrected after photographing in the recording medium together with the digital image signal.

Abe further does not teach the method of extracting the characteristic value and performing

image processing only on signals having the flag.

Ishikawa et al teaches on Column 20, Lines 35-51 a correcting operation wherein a flag

indicating whether or not a digital image signal has been corrected after photographing in the

recording medium together with the digital image signal. Ishikawa et al further teaches the

method of extracting the characteristic value and performing image processing only on signals

having the flag present.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to add the flag indicating method of Ishikawa et al to the signal processing

method of Abe in order to allow the method of extracting the characteristic value and performing

image processing only on signals having the flag present.

15:   Claims 10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN

5,767,983 Terashita in view of USPN 5,010,393 Saito.

16:    In regards to Claim 10, Terashita teaches on Column 4, Lines 12-33 an image processing

method for carrying out image processing on a digital image signal. Terashita teaches the method

of extracting film characteristic data from image signals from a plurality of image frames.

Terashita further teaches the use of carrying out image processing according to the characteristic

value on the digital image signals. Terashita teaches on Column 16, Lines 6-22 that when the

digital image signals are composed of RGB color signals, photometric data for each color signal

in each pixel in each of the digital image signals is calculated. Terashita teaches on Column 16,

Lines 46-55 a that the characteristic value can be a value of the photometric data relative to the

tricolor average of the signals. Terashita further teaches that a table value prepared from the sets

of photometric data may be used. Terashita does not teach that the characteristic value is a value

regarding chroma or color saturation of each of the digital image signals.

Saito teaches on Column 1, Lines 53-68 the use of an image processing method of

performing image processing on a digital signal from images taken from a digital camera. Saito

teaches the use of extracting a characteristic value which is chroma information corresponding to

the ratio of high-chroma colors from digital image signals obtained by photographing an object.

Saito further teaches that this process provides a chroma adjusting method, therefore, carrying

out image processing according to the chroma information from the digital signals. Saito teaches

on Column 1, Lines 53-68 the use of extracting a characteristic value which is chroma

information corresponding to the ratio of high-chroma colors from digital image signals obtained

by photographing an object. Saito further teaches the method of converting the chroma of the

digital image signal, based on the extracted chroma information. Saito teaches that it is

advantageous to perform this signal processing method on image signals because it improves

image quality.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to enable the image copying apparatus of Terashita to perform the image

processing method of Saito in order to provide a chroma adjusting method, therefore, carrying

out image processing according to the chroma information from the digital signals and therefore improve image quality.

17:    In regards to Claim 13, Terashita teaches on Column 40, Lines 30-37 that it is preferred the characteristic value is found based on the digital image signal from which high saturation pixels have been eliminated.

18:   Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,767,983 Terashita.

19:    As for Claims 23-25, Terashita teaches an image processing method that performs image processing on digital image signals that were scanned from film based on an extracted characteristic value from the image data. However, Terashita does not teach that the image processing can be performed based on an extracted characteristic value that corresponds to tone and sharpness.

Official notice is taken that it was well known in the art at the time the invention was made for image processing devices to extract tone and sharpness data from digital images in order to perform image processing on the image data based on tone and sharpness data in order to improve image quality.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the image processing apparatus of Terashita to extract tone and sharpness data to allow the invention of Terashita to perform image processing on the image data based on tone and sharpness data in order to improve image quality.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing
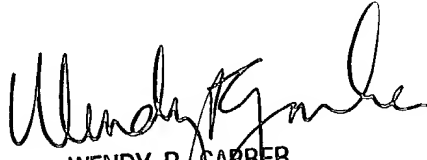
date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to James M Hannett whose telephone number is 703-305-7880. The

examiner can normally be reached on 8:00 am to 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

                                        James M. Hannett
                                        Examiner
                                        Art Unit 2612

JMH
September 24, 2004

WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
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